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COMMONWEALTH OF MASSACHUSETTS
STATE ENERGY CONSERVATION PLAN

Prepared in accordance with
Public Law 94 - 163
The Energy Policy and Conservation Act

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EXECUTIVE SUMMARY University of Massachusetts
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INTRODUCTION

In December of 1975, Congress passed and the President signed the Energy Policy and Conservation Act (Public Law 94-163). Section 365 of that act authorized 150 million dollars for three years to establish state energy conservation programs, designed to reduce projected energy consumption in the year 1980 by 5 percent.

In July of 1976, the Federal Energy Administration awarded \$112,891 to the state of Massachusetts, specifically the Energy Policy Office, to develop state energy conservation plans.

This Executive Summary outlines the key elements of the plan submitted to the Federal Energy Administration. The plan itself contains the rationale and philosophy behind the proposed conservation programs for Massachusetts, detailed program descriptions (including proposed milestones and budgets), estimates of energy savings to be accomplished by each program element, and the proposed structural organization of the conservation program.

MANDATORY PROVISIONS

The Energy Policy Office has determined that the energy conservation program described in the plan will achieve a reduction in projected energy consumption in the year 1980 of at least 5 percent. The plan also includes provisions for satisfying the five required items included in the Energy Policy and Conservation Act.

The required provisions of the plan are: (1) mandatory lighting standards for public buildings; (2) programs to promote the availability of carpooling and vanpooling and public transportation; (3) mandatory standards and policies relating to energy efficiency to govern the procurement practices of the state and its political subdivisions; (4) mandatory thermal efficiency standards and insulation requirements for new and renovated buildings; and (5) traffic laws or regulations which, to the maximum extent practicable consistent with safety, permits the operator of a motor vehicle to turn such vehicle right at a red light after stopping.

1. Mandatory Lighting Standards

The powers and duties necessary for a lighting standards program are presently available to the State Building Code Commission. (S. 17 of C. 23 B of the General Laws: The State Building Code Commission shall exercise its powers and duties so as to adopt "modern technical methods, devices, and improvements which may reduce the cost of ... maintenance over the life of the building.")

The lighting standards program may be among the more difficult of the EPCA programs. It requires that a standard be developed which is sensitive to the range of lighting needs in a wide variety of buildings--including stores, institutional, educational, and governmental buildings. Lighting levels in these buildings are affected by the needs of marketing appeal, worker productivity, and health and safety demands. Further, the quality of light is of concern to commercial establishments, and the light provided by energy inefficient incandescent bulbs may be preferred in those establishments to the more energy-efficient equipment.

Although this program will produce mandatory lighting standards, it is hoped that the program can be implemented with a minimum of regulation and enforcement.

2. Promotion of Carpools and Vanpools

The continuation of the MASSPOOL program will be directed to the Executive Office of Transportation and Construction. During the first year, the Office will examine the initial MASSPOOL demonstration program; list employers needing assistance and offer such assistance; identify groups of smaller employers with potential to initiate joint ride-sharing programs; develop strategy for organizing state and local government ride sharing programs; identify other possible funding sources; inventory existing ride sharing materials, and develop publicity materials; and provide continuing ride-sharing assistance to large employers.

Priority will be given to promotional programs for van-pooling for both public and private sector employers, to provide assistance to employers identified as having the greatest potential for carpool formation, and to developing and maintaining appropriate matching file update procedure for implemented programs. The EOTC will continue to offer computer carpool matching services. An on-going monitoring and evaluation program will allow adjustments to increase the effectiveness of the ride sharing program resources.

3. Energy Efficient Procurement Standards and Policies

The FEA guidelines specify that energy-efficient procurement policies and standards must be developed for all State procurement and for procurement by subdivisions to the extent practicable. Under existing law, 7 M.G.L.A. s. 22, the Commissioner of Administration has the authority to make rules and regulations governing the manner and method of purchasing for the various state departments, offices, and commissions. Any regulations adopted by the Commissioner would be binding on the Purchasing Agent's Division of the Executive Office of Administration and Finance, which has sole responsibility for the Commonwealth and for the actual contracting or purchase of all supplies.

The Bureau of Collective Purchasing, within the Purchasing Agent's Division, has the authority pursuant to Chapter 7, Section 4A of the Massachusetts General Laws, to make collective purchases in cities, towns, districts, counties, or authorities.

The overriding objectives of the Commonwealth's mandatory procurement plan are to reduce long-run costs by utilizing energy-efficient products and to promote the production of energy-efficient products by using the demand altering power of the large governmental purchases involved. The Commonwealth will continue to research the feasibility of applying life-cycle costing to state purchasing activities and will identify those products to which this criteria can be most successfully applied.

4. Thermal and Lighting Efficiency Standards for New Buildings

The legal capability to promulgate standards for new construction rests in the Massachusetts Building Code Commission. The scope of these standards may include measures which reduce the cost of ... maintenance over the life of the building. (Chapter 231B, S.17, clause 6, MGL).

The State Building Code Commission will complete a clear statement of enforceable energy regulations in code language, and take this code document through the State hearing process. Materials will be available to building inspectors, and seminars will be given to develop clear understanding on the part of building code officials of the requirements of the energy code. The BCC will offer assistance to local building officials including a state design review staff to review large or complex buildings, if requested to do so by local officials. The BCC will also operate an information center to provide a qualified central source of information to handle questions regarding interpretation of energy code provisions.

The new building code will be in place and ready for implementation by January 1, 1978, unless an extension of time is granted by the FEA.

5. Right Turn on Red Light After Stopping

The rules and regulations for driving on State Highways were amended on November 19, 1976, in accordance with the provisions of Chapter 85, Section 2, of the M.G.L. to allow a right turn after stopping at a steady circular red signal when a sign is in place permitting such a turn.

A recent review indicates that 80 percent of those signals not on the State Highway System have exclusive pedestrian phases. This equals 1,975 locations, or 64 percent of all signals in the Commonwealth. These locations must prohibit right turn on red because of the nature of an exclusive pedestrian phase, and the safety hazard associated with the turn. There are 3,100 signalized intersections in the Commonwealth. 625 of these are located on State Highways, and 2,475 on local roadways. 40 percent, or 250 of the State Highway locations can be modified for right turn on red. However, because of the urban confines of the location of the local signals, it has been estimated that only 10 percent (250) of these could provide for Right Turn on Red.

About 500 locations out of the 3,100 possible signalized locations are eligible for signing permitting a right turn on red after stopping. Studies will be undertaken for each intersection prior to the placing of signs.

NON-MANDATORY PROVISIONS

The Energy Policy and Conservation Act plan contains proposals for other programs, which will help achieve the required 5 percent goal, and a more comprehensive energy conservation program for the Commonwealth. These programs are outlined below.

1. Energy Conservation Extension Service

The Energy Conservation Extension Service will provide energy conservation training, assistance, and associated services to the commercial sector. The primary focus of the program is to bring about energy savings by informing and assisting the commercial sector in techniques of energy management. The commercial sector here is defined as both public and private non-residential structures.

The Conservation Extension Service will be tailored to meet the specific needs of various subsectors of the commercial sector. Primary focus in the first year of the program will be state owned buildings, municipal facilities, office buildings, retail establishments, and restaurants.

The Energy Conservation Extension Service will be carried out by two teams of technically qualified people, one team directing its efforts in the eastern part of the state, and the other team working primarily in the western part. In future years, the teams will be expanded and additional teams will be added to give more detailed service to the different parts of the state.

2. Public Information and Education

The purpose of the Public Information and Education program is to inform the public about energy conservation measures available to them, and to encourage them to effect those measures. The program will provide background information on the need to save energy and the financial benefits of doing so. In addition, it will explain specific energy saving measures in detail.

The program will consist of three main parts. (1) a media campaign, using public service announcements on radio and television,

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to educate consumers about the need for conservation and about what they can do to conserve; (2) adult education programs for both homeowners and renters, to provide detailed information to interested people; (3) and Project Conserve II, a toll-free number available to all state residents with energy related questions. The toll-free number will also be used to provide homeowners with a free analysis of their home, patterned after the Project Conserve questionnaire and answer.

3. Program and Policy Development

The purpose of this part of the conservation program is to provide an ongoing capability to analyze specific issues, legislation, and regulations, to make recommendations to the Administration for action in these areas. This program area also includes a monitoring program to measure the effectiveness of programs and to help make recommendations for changes or new programs.

Examples of the areas to be investigated include hospital rate regulatory practices and their effect on energy conservation improvements in hospitals; ventilation standards in the state's health code; possibilities for mandatory energy use standards in selected subsectors; possibilities for tax incentive programs to encourage energy conservation; landlord-tenant relationships, both in residential buildings and commercial buildings; legislative incentives for automobile efficiency; and utility rate reform.

4. Waste Oil Recovery

This program will attempt to promote greater recovery and re-use of waste oil which is now discarded or used in an environmentally harmful manner. The program will be run by the Department of Environmental Quality Engineering. The aim will be to publicize existing laws and regulations concerning waste oil disposal and to investigate the issues and make recommendations for further state action.

5. Public Housing

This program will be run by the Department of Community Affairs in conjunction with the public housing modernization program. EPCA funds will be used to evaluate the potential for various energy conservation improvements in public housing and to help prioritize the

spending of modernization funds to achieve the greatest level of energy savings for given levels of expense.

It is anticipated that substantial benefits will result from this program, both in the Local Housing Authorities and to tenants. In projects where tenants pay their own energy costs, the benefits would be direct. In projects where the Local Housing Authority pays for energy costs, the savings that would result from energy conservation would enable the Local Housing Authority to use the additional funds to reduce operating deficits and improve living conditions in the projects.

Conclusion

In summary, the state energy conservation plan includes a number of programs, some required by law and some voluntary, that will help people in the state to realize energy and monetary savings over the coming years.

This state plan is written with the realization that a supplementary state energy conservation plan will soon be prepared to meet the requirements of the Energy Conservation and Production Act (Public Law 94 - 385). The supplemental plan will include provisions for preventing unfair or deceptive practices relating to energy conservation; programs dealing with solar energy and other renewable resource energy forms; expanded public education programs; and a comprehensive program of energy audits. The plan described here is written to accommodate the supplemental plan later this year.

As a last word, it should be mentioned that this state energy conservation plan does not include many items of importance to the Commonwealth's energy policy, such as offshore oil, electric power production, and so on. The plan will become one, albeit the key, part of the state's energy policy, and is not meant to be all-inclusive.

